

EXHIBIT F

UNITED STATES DISTRICT COURT

FOR THE

DISTRICT OF VERMONT

GROCERY MANUFACTURERS ASSOCIATION,
SNACK FOOD ASSOCIATION, INTERNATIONAL
DAIRY FOODS ASSOCIATION, and NATIONAL
ASSOCIATION OF MANUFACTURERS,

Plaintiffs,

v.

Case No. 5:14-cv-117

WILLIAM H. SORRELL, in his official capacity as the
Attorney General of Vermont; PETER E. SHUMLIN,
in his official capacity as Governor of Vermont;
TRACY DOLAN, in her official capacity as
Commissioner of the Vermont Department of Health;
and JAMES B. REARDON, in his official capacity as
Commissioner of the Vermont Department of Finance
and Management,

Defendants.

DECLARATION OF DR. ANDREW DYKE

1. I am a partner and senior economist at ECONorthwest, which provides economic, financial analysis, and planning services for a wide variety of private and public sector clients, and has been in operation since 1974. I have worked at ECONorthwest for more than eight years. I have also served as a finance and policy analyst for the State of Oregon and taught economics and statistics courses at the University of North Carolina-Chapel Hill, Portland State University, and Pacific University. I received a Ph.D. in economics from the University of North Carolina-Chapel Hill. I have presented papers at professional proceedings on economics, and I am a member of the American Economic Association. A copy of my CV is attached as Exhibit 1.

2. This declaration is based on my personal knowledge, training in economics, and experience completing relevant project work at ECONorthwest, including research on food labeling costs, market analyses, benefit-cost analysis, and economic forecasting.

3. Vermont's Act 120 requires manufacturers of foods produced with genetic engineering to disclose on the product label that it is "produced with genetic engineering," "partially produced with genetic engineering," or "may be produced with genetic engineering." Act 120 was enacted on May 8, 2014 and requires compliance with this labeling requirement beginning July 1, 2016.

4. I have been asked to explain how complying with Act 120 will affect food manufacturers whose products are sold in Vermont and subject to the provisions of Act 120. Specifically, I will: (A) identify the decisions faced by food manufacturers for each product subject to the provisions of Act 120; and (B) discuss the incremental costs of relabeling such products to comply with the provisions of Act 120.

Act 120 Only Requires a Manufacturer to Incur the Costs Necessary to Implement the Least Expensive Option Available to Ensure Compliance.

5. Manufacturers can comply with Act 120 in a variety of ways. For each product subject to the provisions of Act 120, a manufacturer can relabel, reformulate using other ingredients or ingredients certified as non-GE, or stop distributing the product in Vermont. Each option will impact a manufacturer's operations differently, and each manufacturer will make compliance decisions that best align with the manufacturer's goals, based on an evaluation of these impacts.

6. In some cases, a manufacturer may select a more costly compliance option than available alternatives. For example, a manufacturer could decide to relabel a product for Vermont sales only when relabeling the product nationwide would impose lower costs. However,

Act 120 only compels manufacturers to incur incremental costs equal to the difference between the least costly feasible compliance option and the costs of status quo operations in the absence of Act 120.¹

7. Similarly, if a manufacturer would have taken the same actions regardless of Act 120, Act 120 does not impose any incremental costs. For example, if the manufacturer was already scheduled for a product reformulation to eliminate genetically engineered ingredients, those costs are not attributable to compliance with Act 120.

8. Manufacturers routinely relabel products for a variety of regulatory and non-regulatory reasons. According to FDA documentation, manufacturers relabel 20-50% of all products in any given year.² When this routine relabeling activity coincides with Act 120 implementation and a manufacturer decides to relabel a non-exempt product, the Act will impose minimal incremental costs on manufacturers.

9. In many cases, manufacturers may not be in a position to reformulate their products with non-GE products. However, Act 120 does not require any manufacturer to reformulate to avoid the labeling requirements. If a manufacturer deems reformulation of a product as too costly, the manufacturer can instead relabel the product. The costs associated with reformulation, if incurred, would result from a business decision to reformulate a product rather than to relabel the product. This is a product-by-product decision.

¹ Of course, manufacturers need not take any action related to existing products that may contain genetically engineered ingredients if they will not be sold in Vermont after July 1, 2016 or if they are exempted by the Act.

² Muth, M., Ball, M., Coglaiti, M., and Karns, S. (2012). Model to estimate costs of using labeling as a risk reduction strategy for consumer products regulated by the Food and Drug Administration. Contract No. GS-10F-0097L, Task Order 5. Revised final report: Prepared for U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. Research Triangle Park, NC: RTI International. U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. Research Triangle Park, NC: RTI International.

10. Over time, manufacturers may revisit compliance decisions in light of changes in production or distribution costs, availability of ingredients (e.g., increased availability of non-genetically engineered ingredients), or other factors. However, Act 120 does not require manufacturers to revisit the initial compliance decisions and therefore imposes only one-time relabeling costs

Direct Incremental Costs Associated with Relabeling are Relatively Small.

11. Identifying the products that must be relabeled is not a difficult task. The list of genetically engineered plants is not large. The FDA publishes a database that identifies all instances in which a producer has completed a consultation with the FDA on commercializing genetically engineered plants. The current list includes only 18 food types.³ While the consultation process is voluntary, in practice all GE food “currently on the US market has undergone what is called a FDA ‘consultation.’”⁴ The FDA requires producers to receive approval before marketing genetically engineered animals, and has not yet issued final approval for any GE food animals.⁵

12. Because the list of food products is relatively small, determining whether a product’s ingredients could include genetically engineered material requires only identifying whether or not each ingredient is potentially derived from a genetically engineered plant approved by the FDA. Manufacturers would not need to determine the status of all ingredients

³ See <http://www.accessdata.fda.gov/scripts/fdcc/index.cfm?set=Biocon> (accessed November 3, 2014). These are limited to corn, soybean, cotton, flax, canola, rice, sugar beet, potato, starch potato, tomato, radicchio, squash, papaya, plum, cantaloupe, alfalfa, and wheat. The FDA has also consulted with producers of GE creeping bentgrass, which may be used as animal feed, but is not intended for use in human food.

⁴ See Wozniak, C. and McHughen, A. (2012), Regulation of Agricultural Biotechnology: The United States and Canada.

⁵ <http://www.fda.gov/AnimalVeterinary/DevelopmentApprovalProcess/GeneticEngineering/GeneticallyEngineeredAnimals/ucm113605.htm> (accessed November 3, 2014).

as long as the manufacturer has determined that one or more of these foods constituted more than .9% of the product by weight.

13. The FDA maintains a labeling cost model that calculates potential costs of labeling changes to retail consumer products subject to FDA oversight.⁶ The model calculates per-product relabeling costs that include labor and materials associated with administrative activities (e.g., legal, marketing approval), graphic design, prepress and printing, and recordkeeping. The model also accounts for costs associated with the recycling or disposal of unused label inventory, per-product costs for analytical testing and market testing and the use of an outside printer. The model directly addresses the differential costs associated with compliance periods as short as three months to account for possible overtime and rush charges for completing labeling activities quickly and the cost of applying stickers to existing labels when there is insufficient time to print new labels.

14. The FDA uses the labeling cost model to estimate the incremental labeling costs attributable to proposed regulatory changes. I have relied upon published results from these analyses to quantify the incremental labeling costs potentially attributable to Act 120. The FDA has estimated that given a one-year compliance period, the one-time per-stock keeping unit (SKU) cost of compliance with a food safety labeling regulation is \$1,966 in 2014 dollars.⁷

15. I have read the declaration of Thomas Dempsey, and understand from his declaration that one member of the Grocery Manufacturers Association has stated that “plate charges” associated with relabeling would cost \$4,000 per SKU, and suggests that the total

⁶ The model, based in part on discussions with trade associations and manufacturers of products regulated by the FDA, was updated in 2010.

⁷ The published amounts were presented in 1998 dollars. I converted these to 2014 dollars using Consumer Price Index data from the Bureau of Labor Statistics (<http://www.bls.gov/cpi/data.htm>, accessed November 3, 2014).

relabeling costs would be higher. While the relevant costs will vary from product to product, the stated amount is more than twice the average per-SKU relabeling cost estimated by the FDA.

16. To place the estimated one-time \$1,966 per-SKU cost in context, I computed this one-time relabeling cost as a percentage of annual per-SKU sales using data from the Food Marketing Institute (FMI), United States Census Bureau County Business Patterns (CBP), and Federal Trade Commission (FTC). To do this, I first determined the weekly and annual per-SKU sales at the median retail grocery store in the Northeast and nationally. I then determined the number of retail grocery stores in each of Vermont; the New Hampshire, Maine, and Vermont region; New England; and the United States, as well as the percentage of these stores that carry the average SKU in order to calculate the average annual sales volume per SKU for grocery stores in each of the geographic areas. Based on this analysis, I calculated the percentage of the average annual sales for each SKU represented by the one-time relabeling cost. This information and the calculations I have made are discussed in paragraphs 17 through 20.

17. FMI publishes an annual report that includes detailed tabulations of information about food retailers in the United States, including information about weekly sales. A recent FMI publication indicates that the median retail grocery store's weekly sales per SKU was \$9.02 in 2014 dollars nationally, and \$9.72 in the Northeast.⁸ This translates into annual sales per SKU for each retail grocery store of \$468.92 nationally and \$505.21 in the Northeast.

18. CBP data provides annually updated data series regarding economic activity by industry.⁹ The most recent CBP data indicates that Vermont has 310 grocery stores (the category includes supermarkets, other grocery stores, and convenience stores); the region comprised of

⁸ Food Marketing Institute (2012). The Food Retailing Industry Speaks. Food Marketing Institute, Arlington, VA.

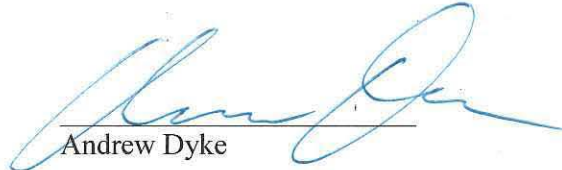
⁹ See <http://www.census.gov/econ/cbp> (accessed November 3, 2014).

New Hampshire, Maine, and Vermont (NH-ME-VT, the region mentioned in the declaration of Richard Michaud) has 1,342 grocery stores; New England has 5,569 grocery stores; and the United States as a whole has 91,530 grocery stores.¹⁰

19. An FTC analysis of grocery store scanner data indicates that the average food product, based on SKU, is sold at 56.2% of grocery stores.¹¹ Using this percentage, the average food product is available in 174 grocery stores in Vermont; 753 grocery stores in NH-ME-VT; 3,127 stores in New England; and 51,397 stores in the United States.

20. Using the computational method described in paragraph 16, the \$1,966 per-SKU one-time labeling cost represents only 2.24% of average per-SKU annual sales in Vermont; 0.516% of average per-SKU annual sales in NH-ME-VT; 0.12% of average per-SKU annual sales in New England; and 0.01% of average per-SKU annual sales in the United States. These calculations indicate that the relabeling cost represents a minimal, one-time, incremental cost for the average SKU distributed in multiple states.

I swear under penalty of perjury that the foregoing statements made by me are true and correct to the best of my knowledge.



Andrew Dyke

Dated: November 14, 2014

¹⁰ Vermont's grocery stores represent 0.3% of all grocery stores in the United States.

¹¹ I calculated the average availability using a weighted average of the mid-points of the categories in the leftmost column and the category averages reported in the rightmost column of Table 1 in Tenn, S., and Yun, J (2007). Biases in Demand Analysis Due to Variation in Retail Distribution. Working Paper No. 287. Bureau of Economics, Federal Trade Commission.

EXHIBIT 1

ANDREW DYKE

Ph.D., Economics, University of North Carolina-Chapel Hill
B.A., Mathematics-Economics, Wesleyan University, Middletown CT

Dr. Andrew Dyke, a Senior Economist and partner at ECONorthwest, has expertise in program evaluation and applied microeconomic analysis in a variety of areas. He has developed and applied sophisticated econometric models in labor, education, state human services, crime, and other areas. His published research includes a peer-reviewed study examining the relationship between election cycles and the criminal justice system, an evaluation of North Carolina job-training programs that was cited the President's Council of Economic Advisor's July 2009 "Preparing the workers of today for the jobs of tomorrow" report. Recent work at ECONorthwest includes projects on K-12 and post-secondary education, workforce development, benefit-cost analysis, child support enforcement, healthcare, and regional modeling of local labor markets and other aspects of the economy.

Prior to joining ECONorthwest, Dr. Dyke was most recently a finance and policy analyst for the Public Health Division of Oregon Department of Human Services. Dr. Dyke has also taught economics and statistics courses at the University of North Carolina-Chapel Hill, Portland State University, and Pacific University.

SELECTED PROJECT EXPERIENCE

- For a private client, reviewed studies on the costs associated with labeling products as containing genetically modified organisms.
- For an Oregon tribe, analyzed historical data on tribal membership and tribe health plan utilization to develop forecasts through 2030 of (a) tribal and health plan membership by age, gender, and geography; (b) health plan utilization; and (c) cost of forecast claims activity. Findings were to inform strategic planning regarding the Tribe's self-insured health plan and wellness center.
- For a West Coast tribe, assessed the feasibility of a new health clinic to be developed by a third part near the tribe's existing clinic operations. The analysis incorporated demographic and facility-siting data to develop measures of relative clinic "supply" near the tribe's existing facility.
- For a private medical provider, ECONorthwest conducted a multi-site market analysis and developed recommendations for strategies targeting specific markets across selected metropolitan areas and market segments. Work included developing data on current and forecast population demographics, market activity, and economic conditions relevant to health insurance markets.
- For a private insurer, conducted a comprehensive market penetration and facility site analysis. The project included conducted a detailed analysis of selected local health insurance markets, assessed recent local, state, and national market trends, and developed recommendations for long and short-term marketing strategies.
- For the Washington State Liquor Control Board, developed an econometric model of liquor store siting that determined the optimal store types and locations across the state.

- For a Washington hospital, ECONorthwest conducted a market analysis for selected outpatient procedures in support of a Certificate of Need application. The project included a geospatial analysis of the location of patient residences relative to the site at which they received services, an analysis of the market concentration for the selected procedures
- For Multnomah County, Oregon and TriMet, the Portland-area regional transit authority, developed and implemented semiannual economic and revenue forecasts.
- For Puget Sound Regional Council, prepared a 30-year regional economic and demographic forecast for the Puget Sound regional economy.
- For Puget Sound Partnership, provide statistical, survey instrument development, and other quantitative support for the development of "practices" and "social capital" indices for the 12-county Puget Sound Region
- For Metro, Portland, Oregon's regional planning organization, evaluated the effectiveness of Metro's CPDG program, which funds planning projects throughout the Metro Region.
- For Lane Transit District (LTD), conducted and reported on economic analysis to support LTD's board make a statutorily required determination about whether the local economy has recovered "to an extent sufficient to warrant" a payroll tax increase authorized in statute.
- For Oregon's Department of Transportation, implemented ECONorthwest's model of highway cost allocation to attribute the costs imposed and revenues generated by vehicles of different weights.
- For the Transportation Research Board/National Academy of Sciences, developed a non-user benefit supplement to AASHTO's manual on user-benefit analysis for highway improvements.
- For Oregon's Department of Transportation, implemented ECONorthwest's model of highway cost allocation to attribute the costs imposed and revenues generated by vehicles of different weights.
- For Portland Development Commission, evaluated Portland's five limited residential tax exemption programs and suggested policy recommendations to achieve better alignment of program goals and intended outcomes.
- For Oregon Department of Justice, analyzed and reported on foreclosure and foreclosure mitigation activity to inform housing advocates and lawmakers of SB 628's impacts and help guide future development of Oregon's foreclosure mitigation efforts.
- For the Seattle City Auditor, in partnership with MEF Associates, conducted an evaluability assessment of the Seattle Youth Violence Prevention Initiative, a city program designed to reduce violence among high-risk youth.
- For Worksystems, Inc. (WSI), assessed post-participation educational outcomes for participants in WSI's SummerWorks youth summer employment program.
- For Oregon's Department of Community Colleges and Workforce Development, evaluated the efficiency of Oregon's Employer Workforce Training Fund (EWTF) at meeting stated

program goals and quantifying the value of EWTF-funded activities to program trainees, Oregon businesses, and taxpayers.

- For Oregon’s Department of Community Colleges and Workforce Development, evaluated ARRA-funded workforce development programs in Oregon. The evaluation included analysis of the long- and short-term economic impacts of program investments and a profile of the extent to which youth program participants re-engaged in education following participation.
- Under a US Department of Labor WIRED grant administered by Worksystems, Inc., expanded ECONorthwest’s workforce development resource map to include seven Oregon counties and three counties in Southwest Washington. Oregon’s Department of Community Colleges and Workforce contracted with ECONorthwest for the development a similar, statewide map.
- Evaluated the BizConnect program, which was implemented under a federal WIRED grant in a 10-county region in and around Portland, and seeks to help schools coordinate career-related learning experiences with businesses.
- For Worksystems, Inc. and the regional Workforce Investment Board, conducted and analyzed a comprehensive survey of workforce development providers in Multnomah and Washington Counties to produce a regional workforce development resource map.
- For Worksystems, Inc., and the City of Portland, developed a resource map of local economic development agencies and a companion resource map of dropout recovery, prevention and retention programs in the Portland area.
- For Worksystems, Inc., the City of Portland, and the Portland Schools Foundation, developed a detailed presentation and associated data appendix on the status of youth in Multnomah and Washington counties, with a focus on “disconnected” youth—individuals 14-24 who are out of school and unemployed.
- For the City of Hillsboro, assessed workforce development service availability and the need for services among residents of the city’s enterprise zone.
- For the Oregon State Criminal Justice Commission, analyzed Oregon’s portfolio of crime prevention programs and assisted CJC in estimating the benefits derived from the portfolio; completed a statistical analysis of recidivism using data from Oregon’s Department of Corrections.
- For the State of Washington, Division of Child Support Enforcement, evaluated the impacts of hospital-based efforts to encourage fathers to voluntarily attest to paternity.
- For the State of Washington, Division of Child Support Enforcement, evaluated a child support demonstration project to improve the state’s electronic child support referral processes.
- For U.S. Department of Human Services Office of Child Support Enforcement, evaluated the implementation and effectiveness of a performance-based incentive payment system for state child support agencies.
- For the State of Washington, Division of Child Support Enforcement, evaluated a child support demonstration project to assist parents in developing and filing parenting plans, for the State of Washington Division of Child Support Enforcement.

- For the Bill & Melinda Gates Foundation, developed a scenario impact model to help guide strategy and implementation of initiatives designed to increase the college readiness of public school students in the United States (ongoing).
- For the Bill & Melinda Gates Foundation, developed a scenario impact model to help guide strategy and implementation of initiatives designed to increase post-secondary educational attainment of the working-age population in the United States (ongoing).
- For the I Have a Dream foundation, evaluate educational outcomes for students of the foundation's Dreamers school and develop a model to help program staff target dropout prevention resources (ongoing).
- For Oregon's Quality Education Commission, conducted a statewide, student-level analysis of post-secondary enrolment and used model output to identify Oregon high schools whose students demonstrate exceptionally high or exceptionally low engagement in post-secondary education, after controlling for student and school characteristics.
- For the Chalkboard Project, in partnership with Education Northwest, conducting the local evaluation for Chalkboard's Teacher Incentive Fund grant that will allow seven Oregon School districts to further implement elements of Chalkboard's CLASS project, including value-added modeling of teacher and principal effectiveness and new performance based compensation systems, and revamped professional development initiatives. Project work includes student growth modeling for participating districts (ongoing).
- In collaboration with Chalkboard Project, Attendance Works, and the Child and Family Poverty Center, analyzed and reported on the extent of chronic absenteeism in Oregon and the relationships among chronic absenteeism and academic outcomes.
- Provided Oregon's Indian tribes with quantitative and qualitative data that illustrate the condition of education for tribal members in Oregon (e.g., student achievement, degree attainment, postsecondary enrollment).
- For Open Meadow Alternative Schools, conducted an evaluation of Step Up, the organization's 9th grade transition program. The evaluation includes a small RCT implemented during 2010 and 2011 at one of the Step Up school sites. The evaluation will include analysis of outcomes for several 9th grade cohorts of participants as they progress from 9th grade to graduation (ongoing).
- For Employers for Education Excellence (E3), conducted an econometric analysis of outcomes at schools funded by E3's Oregon Small Schools Initiative to determine progress made by Initiative schools towards improving student outcomes (ongoing).
- For the Chalkboard Project, analyzed student achievement and high school completion outcomes to inform Chalkboard and other stakeholders about the progress being made in Oregon school districts participating in Chalkboard's CLASS project.
- For a number of Oregon school districts and an ESD, in partnership with Chalkboard Project, analyzed enrollment, spending, and student outcomes to characterize the relative efficiency of school district operations and to help districts identify potential savings where spending exceeds statewide averages.

- For Open Meadow Alternative Schools (OMAS), analyzed student characteristic and outcome data and developed an evaluation database tool containing this data that will allow OMAS staff to implement and monitor program improvement initiatives.
- For the Chalkboard Project, conducted an analysis of Oregon Department of Education data to provide a statistical portrait of Oregon's Hispanic students and their teachers, and of the Hispanic-White achievement gap.
- For the Chalkboard Project, analyzed National Center for Education Statistics survey data to assess teacher professional development practices in Oregon relative to those in other states.
- For the Chalkboard Project, contributed analysis for Chalkboard's annual report on the condition of K-12 education in Oregon (multiple years).
- Benchmarked the conditions of Black Oregonians in education, housing, and employment and developed a public policy agenda for the *The State of Black Oregon* report. Urban League of Portland.
- For the Black Parent Initiative and Chalkboard Project, conducted an analysis of Oregon Department of Education data to provide BPI with a statistical portrait of Black students and their teachers in Multnomah County, and the Black-white achievement gap.
- For the SEED Foundation, as a subcontractor to Education First, developed a return-on-investment (ROI) model for public investments in proposed SEED public boarding schools in Ohio. Customized the model to incorporate district-specific data for five Ohio school districts. The analysis also included an investigation of potential funding sources.

COMMUNITY SERVICE

- Member of the education data advisory teams for the Greater Portland Vancouver Indicators Project and the Portland Schools Foundation's Cradle to Career Initiative. Both projects seek to develop community indicators and to use indicator data to drive greater community engagement and provider alignment to improve regional outcomes (ongoing).

SELECTED PUBLICATIONS AND PRESENTATIONS

- Tapogna, John, Kevin E. Cahill, and Andrew Dyke. 2014. "Comparing Spending and Academic Results is Imperative." Idaho ED News (July).
- Panelist, "Making the Business Case for Livable Communities," Creating Livable Communities for All Ages Conference, Portland, 2014.
- "Chronically Absent Students: An Opportunity to Expand Public Health Partnerships with Educators", with T. Henderson, presented at the 2013 Oregon Public Health Association annual conference.
- Raphael, J., Dyke, A., and Scott, C. The Correspondence Between High School Writing Scores and First-Year Community College Remediation in Oregon. Portland, OR: Education Northwest, REL Northwest, 2011.
- "Electoral Cycles in the Administration of Criminal Justice", *Journal of Public Choice*, vol. 133, December 2007, pp. 417-437.

- “The Effects of Welfare-To-Work Program Activities and Training on Labor Market Outcomes”, with Carolyn J. Heinrich, Peter R. Mueser, and Kenneth R. Troske, *Journal of Labor Economics*, vol. 23, no. 4, July 2006, pp. 567-608.
- “The Effect of Layoffs on Economic Crime”, with Helen Tauchen, working paper.
- “Trends in educational attainment of Oregon’s labor force,” presented at the 2009 Pacific Northwest Regional Economics Conference.
- “Economic Realities of Healthcare Reform in Oregon,” presented at the 2008 Oregon Health Summit.
- “Electoral Cycles in the Administration of Criminal Justice”, presented at the Southern Economics Conference, 2003.
- “Do Welfare Recipients Really Vote With Their Feet: Intrastate Migration and Welfare Reform in North Carolina”, with Dean Duncan, Michelle Dylan, Monica Kum, and Nan Park, presented at the APPAM Fall Research Conference, 2000.